

- (3) Random variables – values arise as a result of chance factors, and cannot be predicted in advance. Values resulting from measurement procedures are referred to as observations or measurements.
- (4) Discrete random variable – characterized by gaps or interruptions in the values it can assume; you can count out possible values
- (5) Continuous Random Variable – can assume any value within a specified relevant interval of values assumed by the variable

Population – the largest collection of entities for which we have an interest at a particular time. A population of values is the largest collection of values of a random variable for which we have an interest at a particular time. Populations may be finite or infinite.

Sample – part of a population.

Measurement – the assignment of numbers to objects or events according to a set of rules

- (1) Nominal Scale – classifying into mutually exclusive and exhaustive categories.

Examples are medical diagnoses and age groups.

- (2) Ordinal Scale - ranking among categories, where the distance between categories need not be equal.

Examples are below average, average, above average, and the pain scale, where nurses ask you to rate your pain on a scale of 1 to 10.

- (3) Interval Scale – has a unit distance and a zero point, so there is equality of intervals; this is a truly quantitative scale.

An example is temperature. For F° and C° , we have arbitrary 0's. The distance from 30° to 40° represents the same heat gain as the distance from 70° to 80° ; but 20° is not twice as hot as 10° .